AMENDMENTS TO THE CLAIMS

1. (Original) A thermistor device comprising a first layer comprised of a first substance having a positive or negative temperature coefficient of resistance and a second layer comprised of a second substance having conductivity or semiconductivity and located directly on the first layer.

2. (Original) The device according to claim 1, wherein said first substance is a substance having a positive temperature coefficient of resistance and having 100 mΩcm or less at operating temperature or lower.

3. (Original) A thermistor device comprising a first layer comprised of a first substance having a positive temperature coefficient of resistance and a second layer comprised of a second substance having semiconductivity and formed directly on the first layer, wherein the interface between the first and second layers changes to a pn junction, as the first substance changes from being conductive to semiconductive or insulative at or near the transition temperature T_{M-I}.

4. (Original) A thermistor device comprising a first layer comprised of a first substance having a positive temperature coefficient of resistance and a second layer comprised of a second substance having conductivity and located directly on the first layer, wherein the interface between the first and second layers changes to a schottky barrier, as the first substance changes from being conductive to semiconductive or insulative at or near the transition temperature T_{M-I}.

5.-12. (Canceled)

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CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

13. (New) The device according to claim 1, wherein said first substance is selected from substances which belong to the strongly correlated electron systems.

14. (New) The device according to claim 3, wherein said first substance is selected from substances which belong to the strongly correlated electron systems.

15. (New) The device according to claim 4, wherein said first substance is selected from substances which belong to the strongly correlated electron systems.

16. (New) The device according to claim 1, wherein said first substance is selected from the group consisting of vanadium oxides $(V_{(1-x)}M_x)_2O_3$ (M represents Cr or Ti, $O \leq x \leq 0.2$), $NiS_{(2-y)}Se_y$ $(0.5 \leq y \leq 1.67)$, bisethylenedithio-tetrathiafluvalene salts and manganese oxides $(M'_{(1-z)}M''_z)MnO_3$ (M' represents an alkaline earth element, M'' represents a rare earth element, $0 \leq z \leq 0.6$).

17. (New) The device according to claim 3, wherein said first substance is selected from the group consisting of vanadium oxides $(V_{(1-x)}M_x)_2O_3$ (M represents Cr or Ti, $0 \leq x \leq 0.2$), $NiS_{(2-y)}Se_y$ $(0.5 \leq y \leq 1.67)$, bisethylenedithio-tetrathiafluvalene salts and manganese oxides $(M'_{(1-z)}M''_z)MnO_3$ (M' represents an alkaline earth element, M'' represents a rare earth element, $0 \leq z \leq 0.6$).

18. (New) The device according to claim 4, wherein said first substance is selected from the group consisting of vanadium oxides $(V_{(1-x)}M_x)_2O_3$ (M represents Cr or Ti, $0 \leq x \leq 0.2$), $NiS_{(2-y)}Se_y$ $(0.5 \leq y \leq 1.67)$, bisethylenedithio-tetrathiafluvalene salts and manganese oxides $(M'_{(1-z)}M''_z)MnO_3$ (M' represents an alkaline earth element, M'' represents a rare earth element, $0 \leq z \leq 0.6$).

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Seattle, Washington 98101
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19. (New) The device according to claim 1, wherein said second substance is selected from the group consisting of n-type semiconductive oxides, p type semiconductive oxides and p- or n-type single element semiconductors.

20. (New) The device according to claim 3, wherein said second substance is selected from the group consisting of n-type semiconductive oxides, p type semiconductive oxides and p- or n-type single element semiconductors.

21. (New) The device according to claim 4, wherein said second substance is selected from the group consisting of n-type semiconductive oxides, p type semiconductive oxides and p- or n-type single element semiconductors.

22. (New) The device according to claim 1, wherein said second layer has a thickness of 1000 nm or less.

23. (New) The device according to claim 3, wherein said second layer has a thickness of 1000 nm or less.

24. (New) The device according to claim 4, wherein said second layer has a thickness of 1000 nm or less.

25. (New) A thermistor apparatus comprising a thermistor device and a voltage control means for controlling an applied voltage to the thermistor device, wherein said thermistor device comprises a first layer comprised of a first substance having a positive temperature coefficient of resistance and a second layer comprised of a second substance having conductivity or semiconductivity and located directly on the first layer.

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CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
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Seattle, Washington 98101
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26. (New) A thermistor apparatus comprising a thermistor device and a voltage control means for controlling an applied voltage to the thermistor device, wherein said thermistor device comprises a first layer comprised of a first substance having a positive temperature coefficient of resistance and a second layer comprised of a second substance having semiconductivity and located directly on the first layer, and the interface between the first and second layers changes to a pn barrier or a schottky barrier, as the first substance changes from being conductive to semiconductive or insulative at or near the transition temperature T_{M-I}.

27. (New) A thermistor apparatus comprising a thermistor device and a voltage control means for controlling an applied voltage to the thermistor device, wherein said thermistor device comprises a first layer comprised of a first substance having a positive temperature coefficient of resistance and a second layer comprised of a second substance having conductivity and located directly on the first layer, and the interface between the first and second layers changes to a pn junction or a schottky barrier as the first substance changes from being conductive to semiconductive or insulative at or near the transition temperature T_{M-I}.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100